

# **Malheur National Forest Invasive Species**

## **Wilderness, Trails & Recreation Specialist Report**

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for:

Malheur National Forest

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## Introduction

This analysis describes the existing condition for the recreation setting and opportunities on the Malheur National Forest and the potential effects of implementing one of the Invasive Species program alternatives A, B, C, or D.

### *Overview of Issues Addressed*

Introduction of invasive species can have notable affects on recreation resources and activities. These affects may have a range of effects depending on species, plant architecture, plant chemical composition, and/or associated environmental alteration.

Invasive species may be introduced at developed campgrounds, dispersed camp sites, trailheads, sno-parks (Oregon colloquialism for snow park), i.e. recreation parking areas for unloading/loading snow machines, boat launch areas, visitor centers or interpretive sites. Even more insidious is when invasive species are introduced along trails or at remote wild and scenic, wilderness, or other back country areas. In these special designated areas detection, mapping, and treatments may often presents a greater challenge. Wilderness or Wild River special areas typically prohibit use of motorized equipment for treatment, and often may restrict other treatments commonly used in other areas such as biological control.

Issues raised during the scoping raised concerns over herbicide effects on people and animals when used in areas frequented by recreationists such as campgrounds, dispersed camping sites, interpretive sites, and trail systems. Others expressed concerns over the effects of herbicide use changing the wild character of roadless areas (IRAs), Wildernesses, Wild and Scenic Rivers (WSR), National Scenic Areas (NSA), National Scenic Trails (NST), and Research Natural Areas (RNA)

Others expressed concerns about preventing or controlling invasive species vectors associated with recreational uses including OHV travel, recreation stock use, and other traditional recreation uses such as site seeing, recreational driving, hiking, camping, and picnicking. Implementing weed free forage would be one example of a practical preventative measure. However, these issues are addressed through the Region 6 FEIS ROD (2005) and as such are outside the scope of this analysis.

## Affected Environment

### *Existing Condition*

**Recreation Setting:** NVUM inventories are not intended to specifically examine in depth recreation activities on a national forest. However, they do provide some basic information for recreation uses on the MNF including vehicle travel, OHV travel, and other recreation pursuits. The NVUM overall view of recreation activities on the MNF is germane to invasive species management because recreation activities are unquestionably major vectors for introduction and spread of invasive species. This is especially true for activities associated with motorized travel.

Unfortunately the two NVUM inventories conducted in 2004 and 2010 differed somewhat in methodologies. Consequently, they should not be used for trend analysis. However they are useful for a snapshot of overall forest visitor use on the Malheur NF. The inventory data are summarized in Figures 1 and 2 shows the range of recreation activities surveyed for the MNF

inventories, the percent of visits (not visitors) participating in the activity, and if the activity was the primary reason for the visit.

The data suggests a dramatic decrease in the total number of forest visitors between the two sample dates. In 2004 Malheur NF visits were estimated at 422,666 compared to only 261,400 in 2010. This represents almost a 40% decline in the number of forest visits between the two sample years.

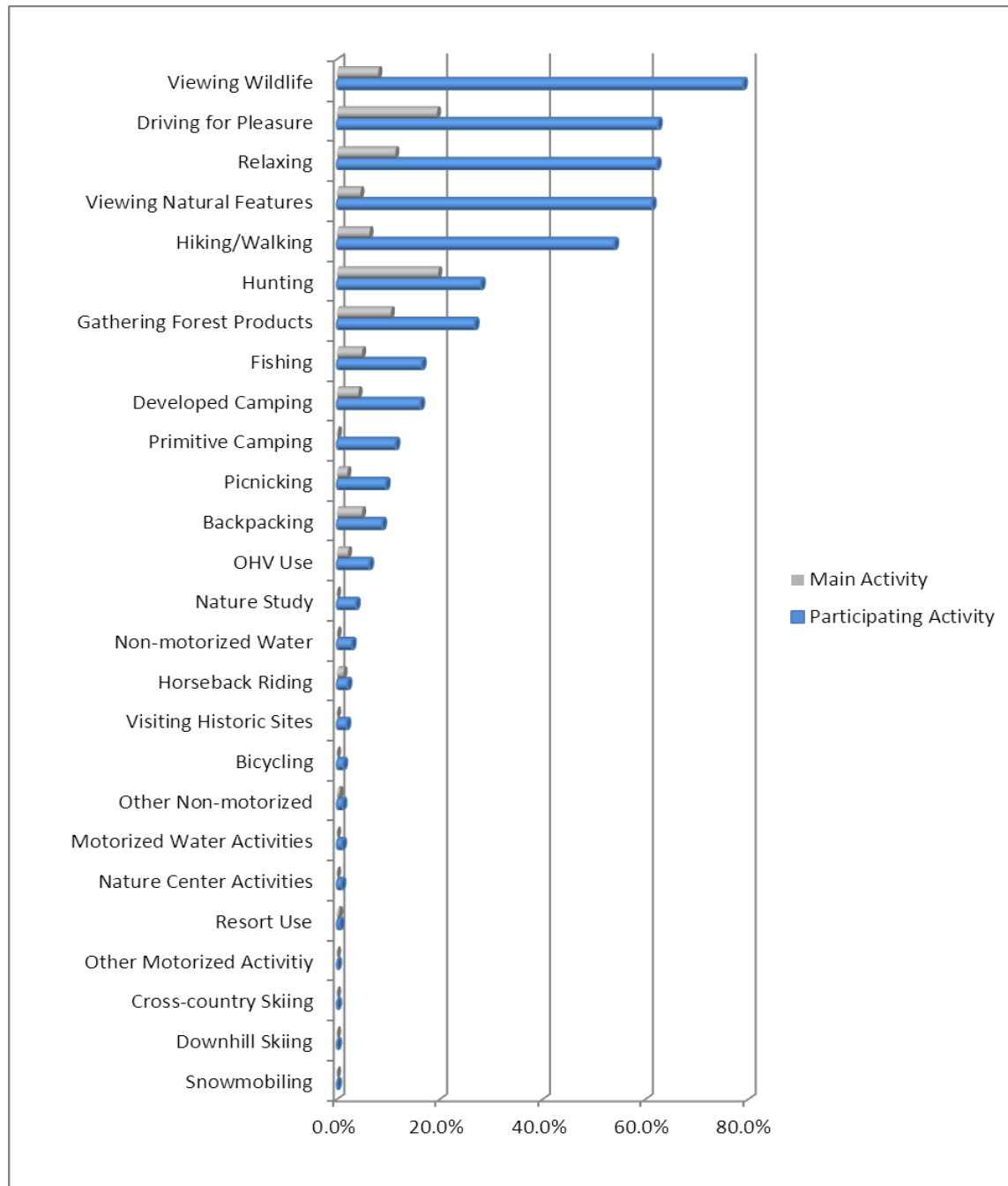
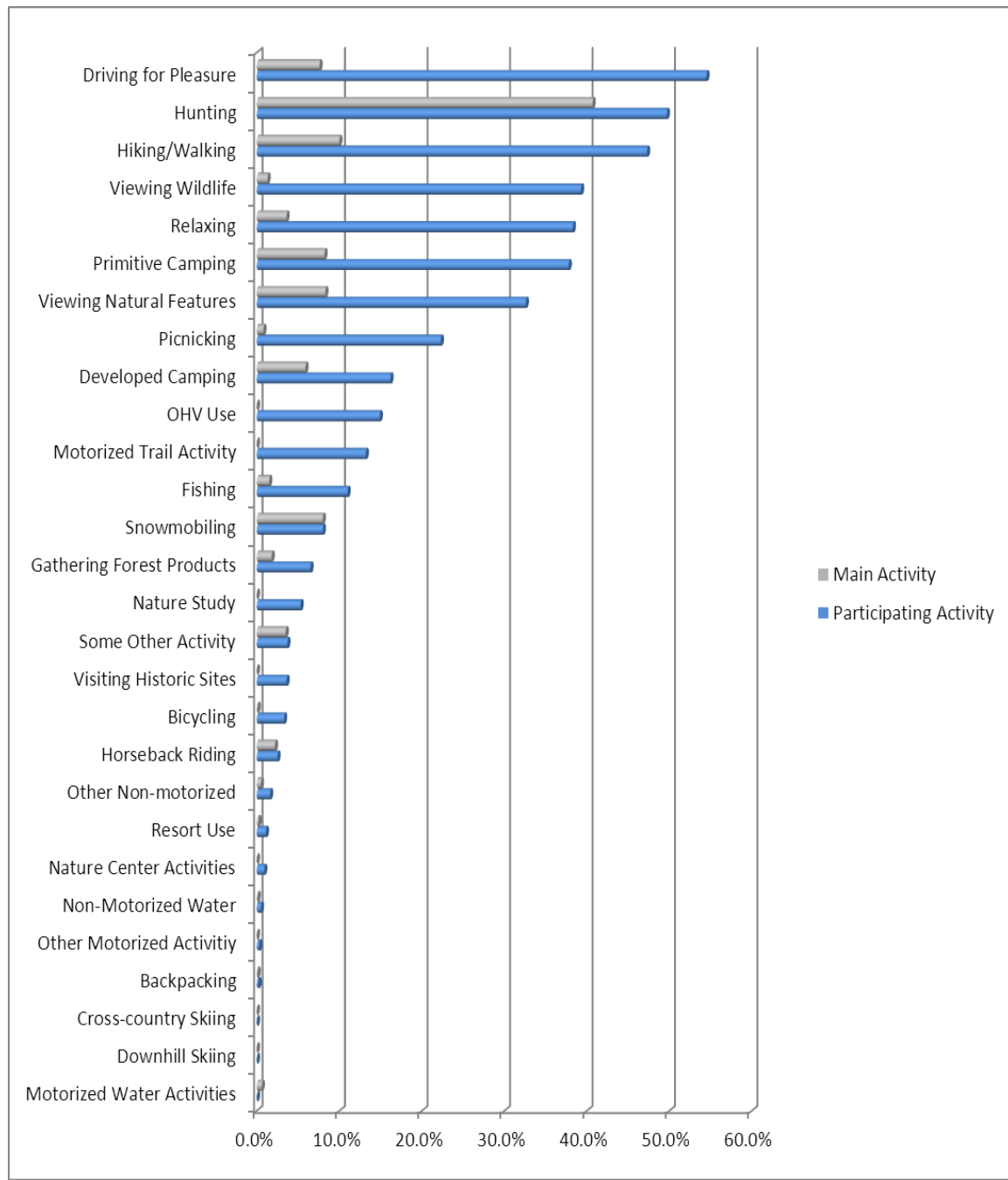


Figure 1. Malheur National Forest NVUM 2003-04 summarized data



**Figure 2. Malheur National Forest NVUM 2009-10 summarized data**

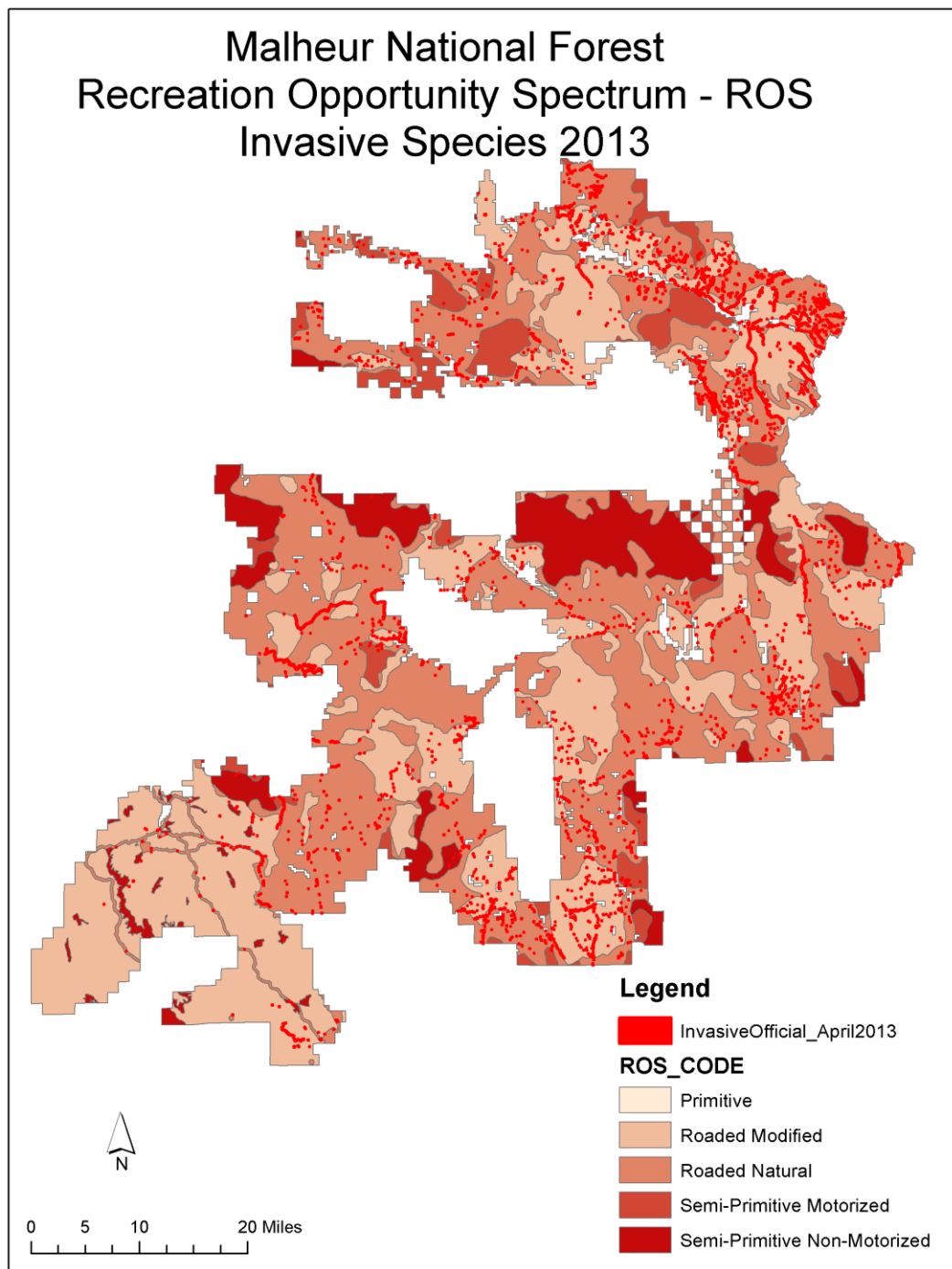
**Motorized Travel:** What also is apparent from the data is the overwhelming reasons for forest visits were dependent on motorized access as either the Primary Activity or as a Participating activity. Consistent among years was the main reason visitors came to the Malheur forest was to: Drive for Pleasure, View Wildlife, Hunt, Relax, or for Hiking/Walking (which necessitated the use of motorized vehicles to reach the starting location). This consistent association between recreation activities and motorized use is an important consideration for successful invasive species management on the Malheur NF.

**Recreation Opportunity Spectrum (ROS):** Recreation opportunities on the Malheur NF are focused toward meeting forest management objectives as identified in the Malheur Forest Plan. However, the rise in motorized activity over the past two decades represents a substantial change with profound potential toward affecting ROS opportunities. This is equally an important ramification as well for invasive species management. ROS classes for the MNF are displayed in Figure 1. The increase in motorized travel carries the potential to increase the probability of invasive species introduction; essentially combining two of former Chief’s Boswell’s focus on four threats of unmanaged recreation and invasive species introduction. The increase in motorized activity in the more primitive ROS holds the potential for introducing and spreading invasive species into less frequented areas, hence decreasing the likelihood of implementing EDRR (early detection and rapid response).

The Malheur NF is infamously known for having the second most miles of National Forest System roads, only marginally surpassed by Oregon’s Femont-Winema National Forest. Maintaining this road infrastructure in the face of shrinking budgets is increasingly problematic and has resulted in an increase in the number of “challenging” and rugged roads on the Forest, e.g. Deer Creek or Crane Crossing. In addition, management presence has diminished generally across the Forest as budgets for field going personnel and signing has diminished. When considered in combination, the extensive road system, predominant importance of road based recreation activities, and low forest service presence increase the opportunity for invasive specie establishment and overall diminish the success of implementing and effective EDRR strategy. The acreages and location of the Malheur Recreation Opportunity Spectrum categories are shown in Table 1 and Figure 3.

<b>Recreation Opportunity Class</b>	<b>Acres</b>	<b>Recreation Opportunity Class</b>	<b>Acres</b>
Roaded Natural	777,425 (46%)	Roaded Natural	777,425 (46%)
Roaded Modified	665,190 (39%)	Roaded Modified	665,190 (39%)
Semi-Primitive Motorized	101,378 (6%)	Semi-Primitive Motorized	101,378 (6%)

**Table 1. Recreation Opportunity Spectrum categories on the Malheur NF**

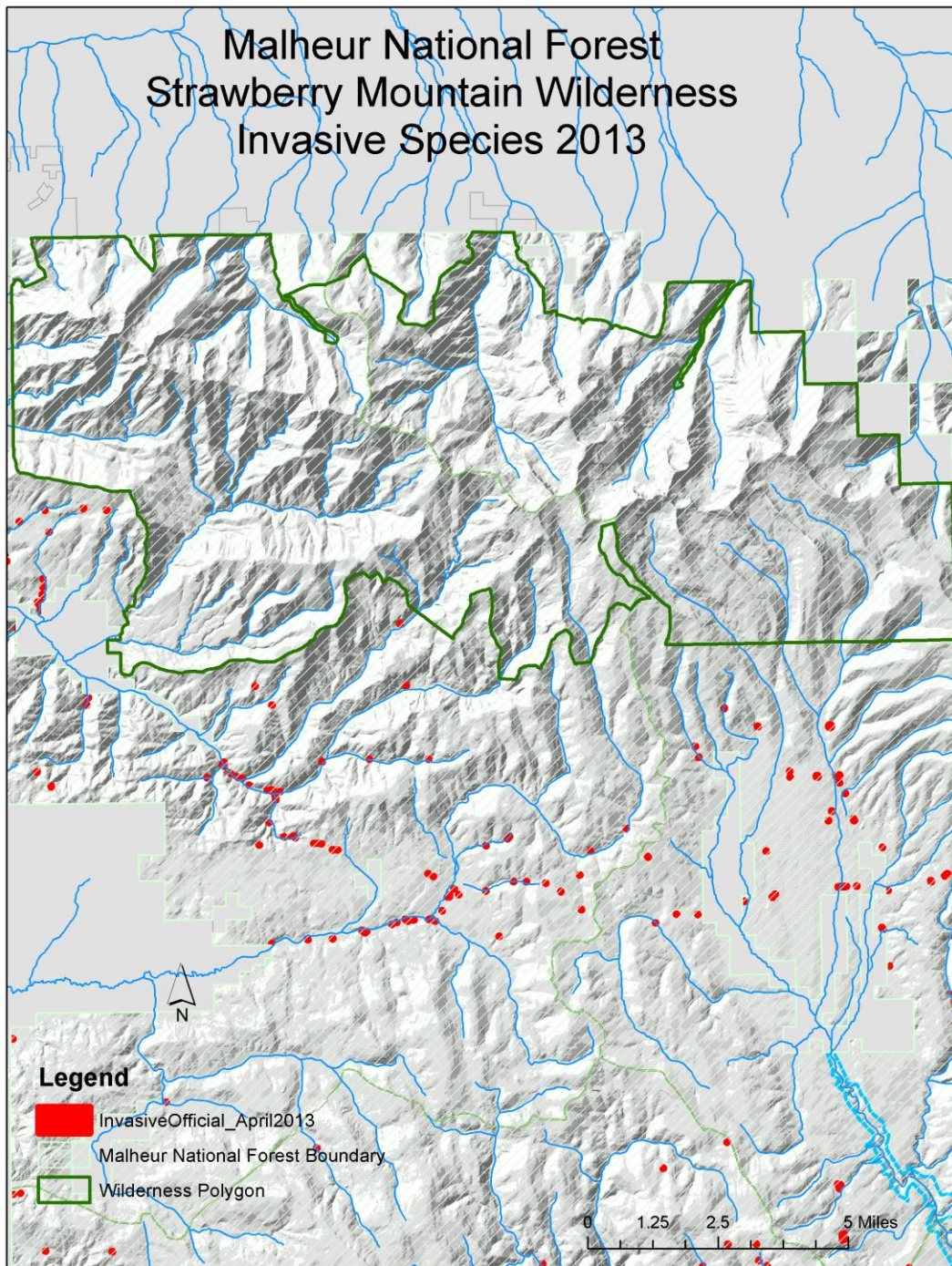


**Figure 3. Recreation Opportunity Spectrum (ROS) and currently mapped Invasive species on the Malheur National Forest.**

**Wilderness Areas:** The Malheur NF contains two Wilderness Areas, Strawberry Mountain (68,700ac.) and Monument Rock (12,620 ac.) (Figure 4 and 5). The Wilderness Act prohibits motorized or mechanized use, major invasive species vectors, within Wilderness Area Boundaries. However, recreationist, pets, pack stock, livestock grazing, wildlife, and natural seed

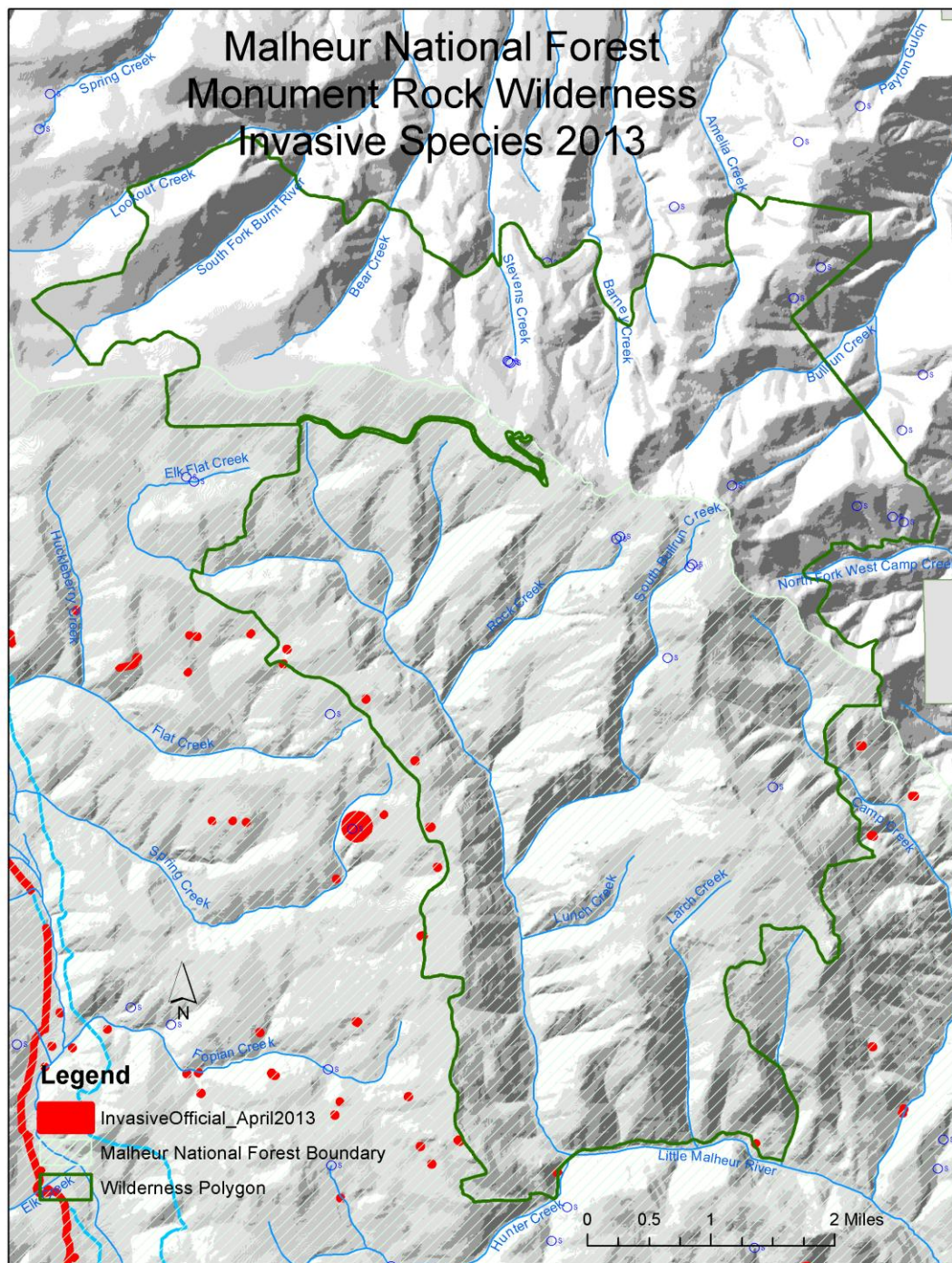


dispersal have successfully introduced invasive species into these Wilderness Areas. Current invasive species surveys have documented 2.2 acres of invasive plant infestations at 8 locations in the Wildernesses. The Wilderness surveys are not considered to be complete and ongoing awareness and additional surveying will be essential for managing invasive species within these special areas. In addition, invasive plant sites occur at or near some of the wilderness trail heads and on roads leading to, and adjacent to, the wilderness areas. It is likely more infestations will arise in the future. It is anticipated that these additional infestations will most likely be more severe in areas with higher use levels such as near trail heads, along trails, in riparian areas, in recent burns, or in concentrated use campsites.



**Figure 4. Malheur National Forest, Strawberry Mountain Wilderness currently mapped and Invasive species 2013.**



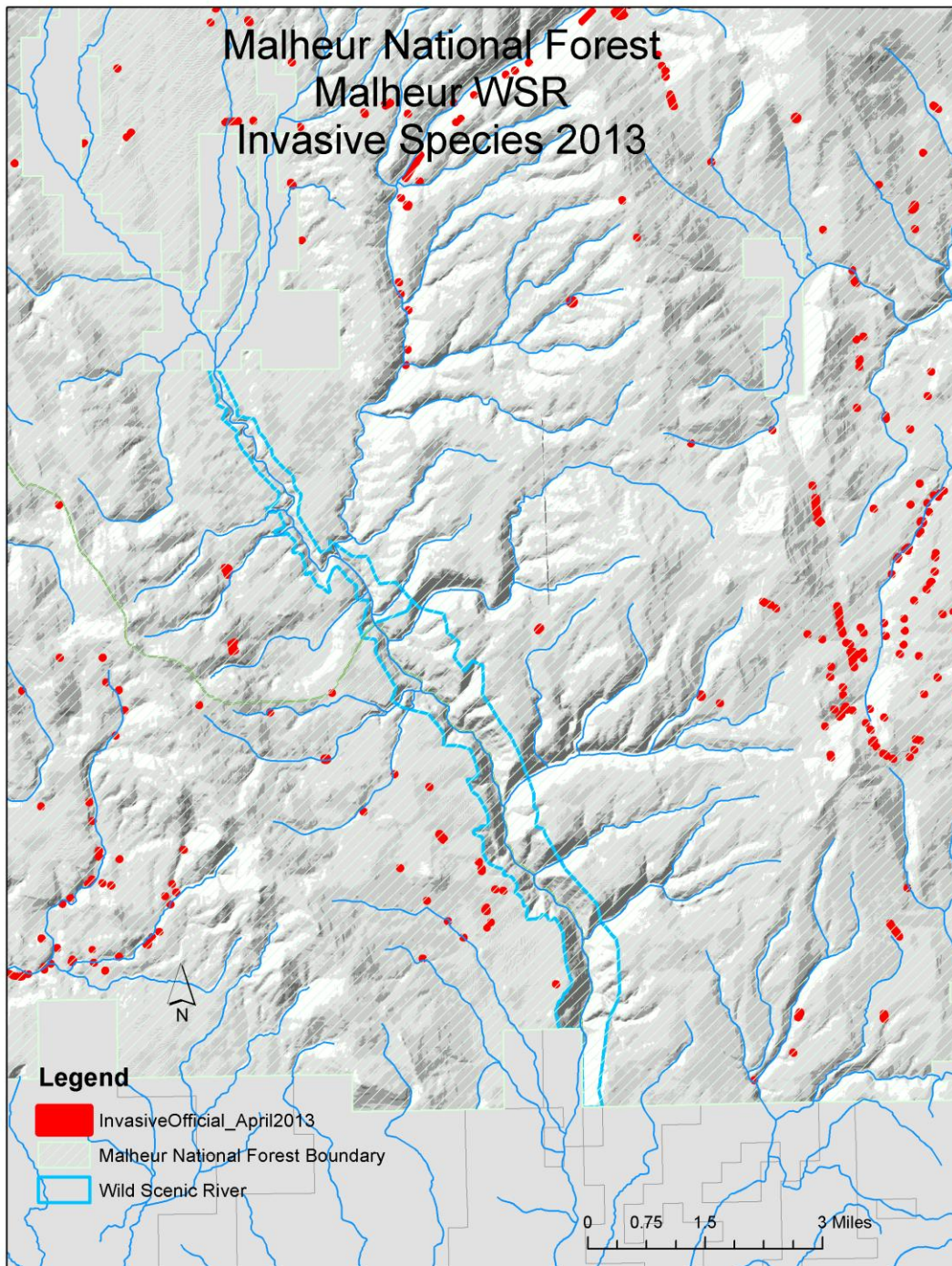


**Figure 5. Malheur National Forest, Monument Rock Wilderness and currently mapped Invasive species 2013.**

**Wild & Scenic Rivers:** There are two congressionally designated wild & scenic rivers (WSR) on the Malheur National Forest, the Malheur River WSR and the North Fork of the Malheur WSR (Figures 6 and 7). The Malheur River WSR is 12 miles long with 6 miles designated as Wild and

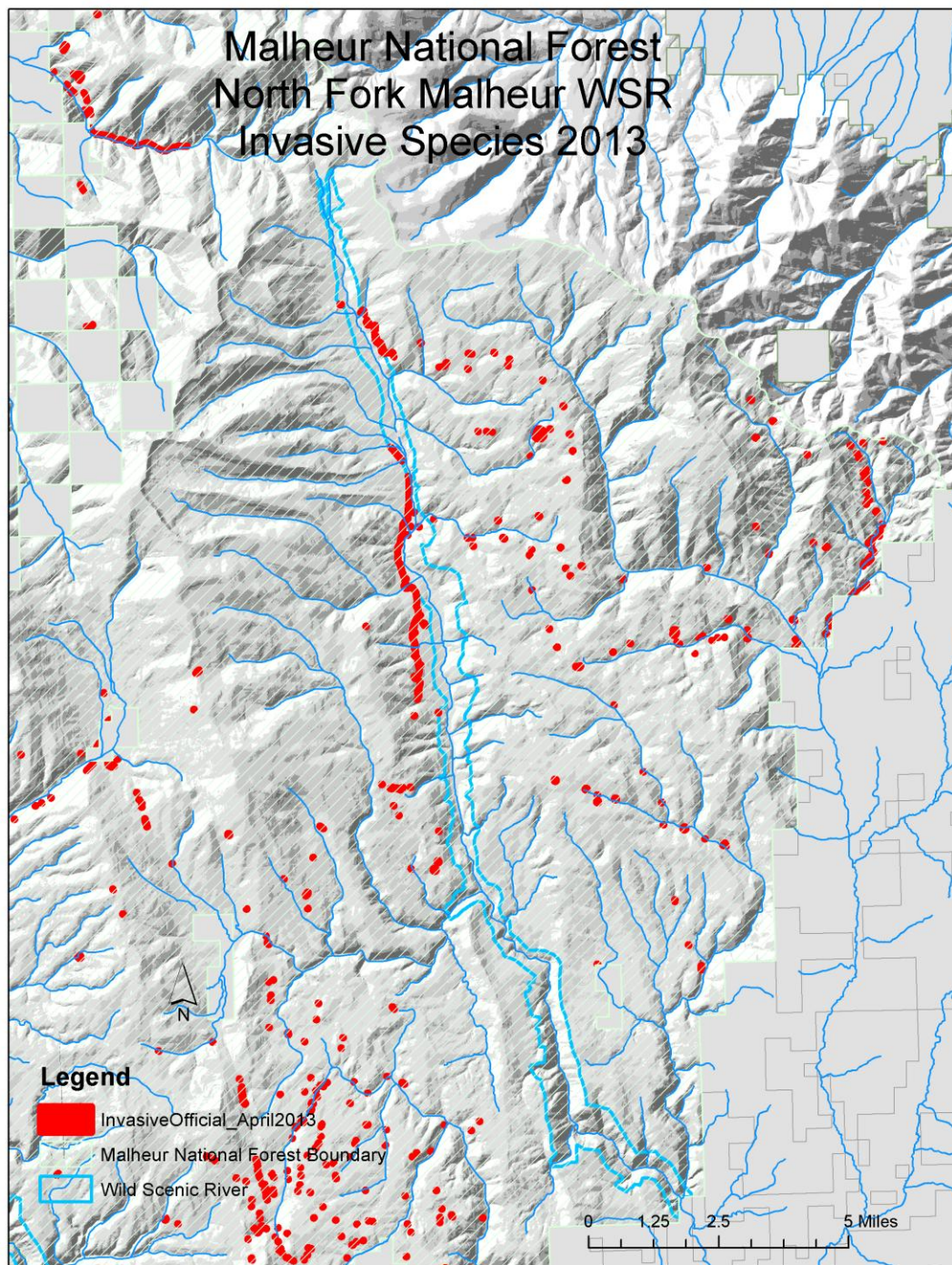
6 miles designated as Scenic. The WSR corridor is comprised of 2,961 acres designated wild and 797 acres designated scenic totaling 3,758 acres. The North Fork of the Malheur River WSR is designated a scenic WSR for 22.9 miles with the corridor encompassing 7,034 acres. ) The Malheur Forest Plan, as amended by their respective Malheur and North Fork Malheur WSR Plans, generally prohibits motorized use off Forest system roads and trails within both the Scenic and Wild boundaries of both of rivers. These motorized access restrictions will aid in reducing the risk of introducing invasive plant species. There remain other vectors associated with recreational uses, e.g. dispersed campsites, hiking, horseback riding, and livestock grazing in some areas, which may serve as vectors for invasive plant species. Current invasive plant surveys in the WSRs indicate infestations totaling 0.9 acres. Additional infestation will most likely be associated with areas of heavier use, such as near trail heads, along the river riparian zones, along trail, in concentrated campsites, and in recent burns.





**Figure 6. Malheur National Forest, Malheur River Wild and Scenic River and currently mapped Invasive species 2013.**





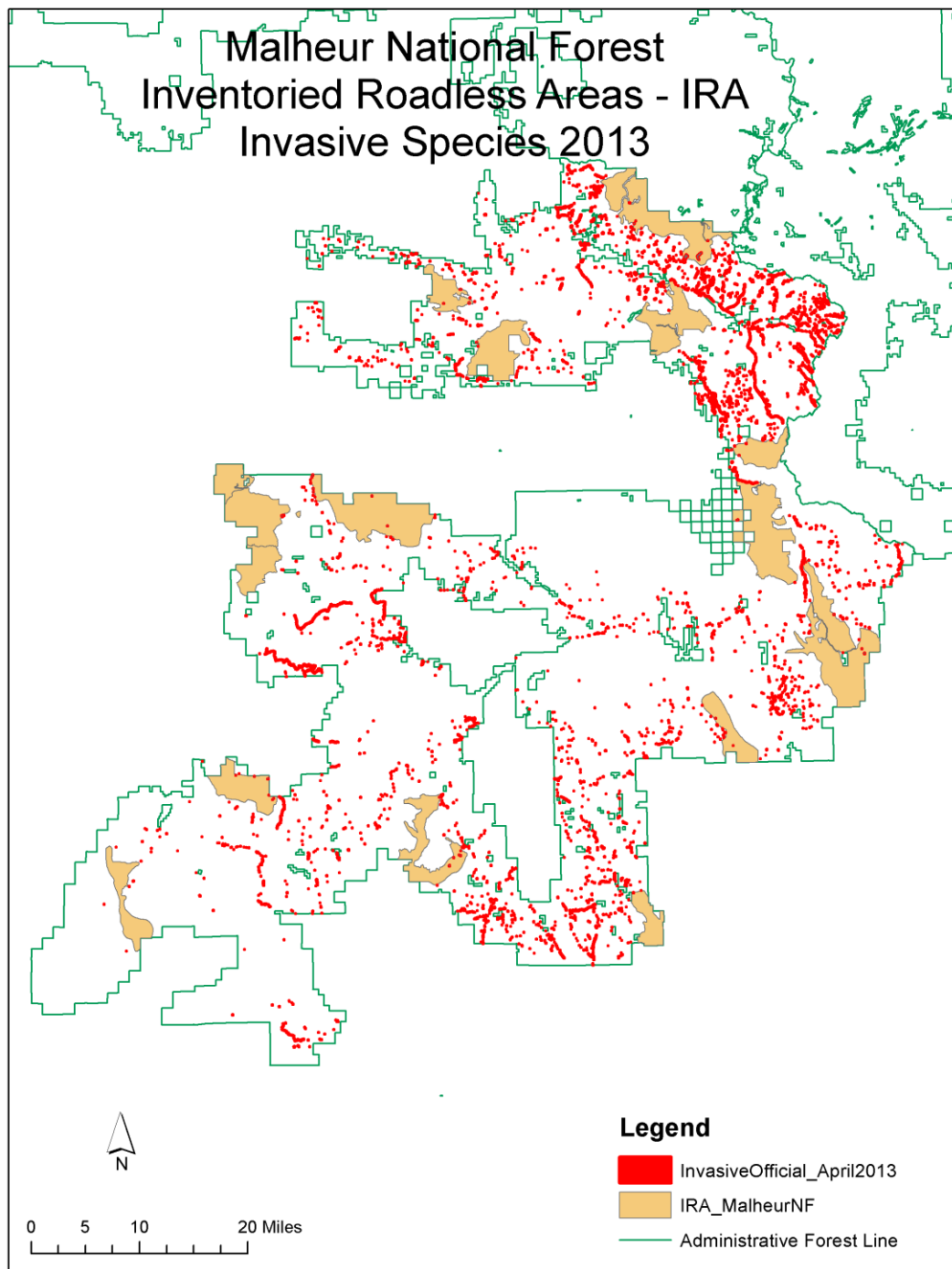
**Figure 7. Malheur National Forest, North Fork of the Malheur River Wild and Scenic River and currently mapped Invasive species 2013.**

**Inventoried Roadless Areas:** Inventoried Roadless areas (IRA) were identified under the 2001 Roadless Area Conservation Rule. Nineteen IRAs are designated on the Malheur National Forest (Table 2 and Figure 8). These IRAs have a total of 188,353 acres of Forest lands. The Forest Plan recognizes these special areas as a combined portions of the Semi-Primitive Non-Motorized,

Semi-Primitive Motorized, and Wild and Scenic River Management Areas (MAs 10, 11, and 22). The motorized vehicle restrictions in portions of the IRAs, are somewhat similar to restrictions in Wild and Scenic Rivers corridors and Semi-Primitive Non-Motorized management areas. This will aid in reducing the likelihood of invasive species introduction and spread within IRAs via motorized recreation activities. The Semi-Primitive motorized IRA would have reduced motorized access, and hence less potential for infestation spread by motor vehicle access but not quite to the extent enjoyed by Wilderness and Wild Rivers areas. Current IRA invasive plant infestations total 25 acres comprised of 50 known location. Additional infestations will most likely occur in areas receiving heavier visitor use, such as along trail, in riparian zones, in concentrated campsites, and in recent burns.

<b>Inventoried Roadless Area</b>	<b>Acres</b>
Aldrich Mountain	4,924.72
Baldy Mountain	6,415.93
Cedar Grove	113.98
Dixie Butte	12,207.98
Dry Cabin	12,273.64
Flag Creek	7,716.41
Fox Creek	5,845.93
Glacier Mountain	19,568.38
Greenhorn Mountain	15,927.16
Jumpoff Joe	3,889.62
Malheur River	7,282.54
Mcclellan Mountain	21,213.02
Myrtle Silvies	11,678.69
Nipple Butte	11,353.90
North Fork Malheur	18,068.60
Pine Creek	5,461.57
Shaketable	6,763.89
Silver Creek	7,948.20
Utley Butte	9,699.11
<b>Total Acreage</b>	<b>188,353.26</b>

**Table 2. Malheur National Forest Inventoried Roadless Areas (IRA) acreage.**



**Figure 8. Malheur National Forest Inventoried Roadless Areas (IRA) and currently mapped Invasive species 2013.**

**Scenic Areas:** The Malheur National Forest has one National Scenic Area, the Vinegar Hill – Indian Rock Scenic Area comprised of 17,234 acres (Figure 9). The management direction for Scenic Areas is to manage this area to preserve and protect outstanding natural esthetics. Current



known invasive plant infestations total 2.4 acres. Motorized travel is restricted within the NSA to winter use only. As with other special areas that prohibit or restrict motorized access, a major source of invasive introductions, the likelihood of introducing or spreading invasive species is commensurately reduced. Additional infestations will most likely occur in areas receiving heavier visitor use, such as along trail, in riparian zones, in concentrated campsites, and in recent burns.

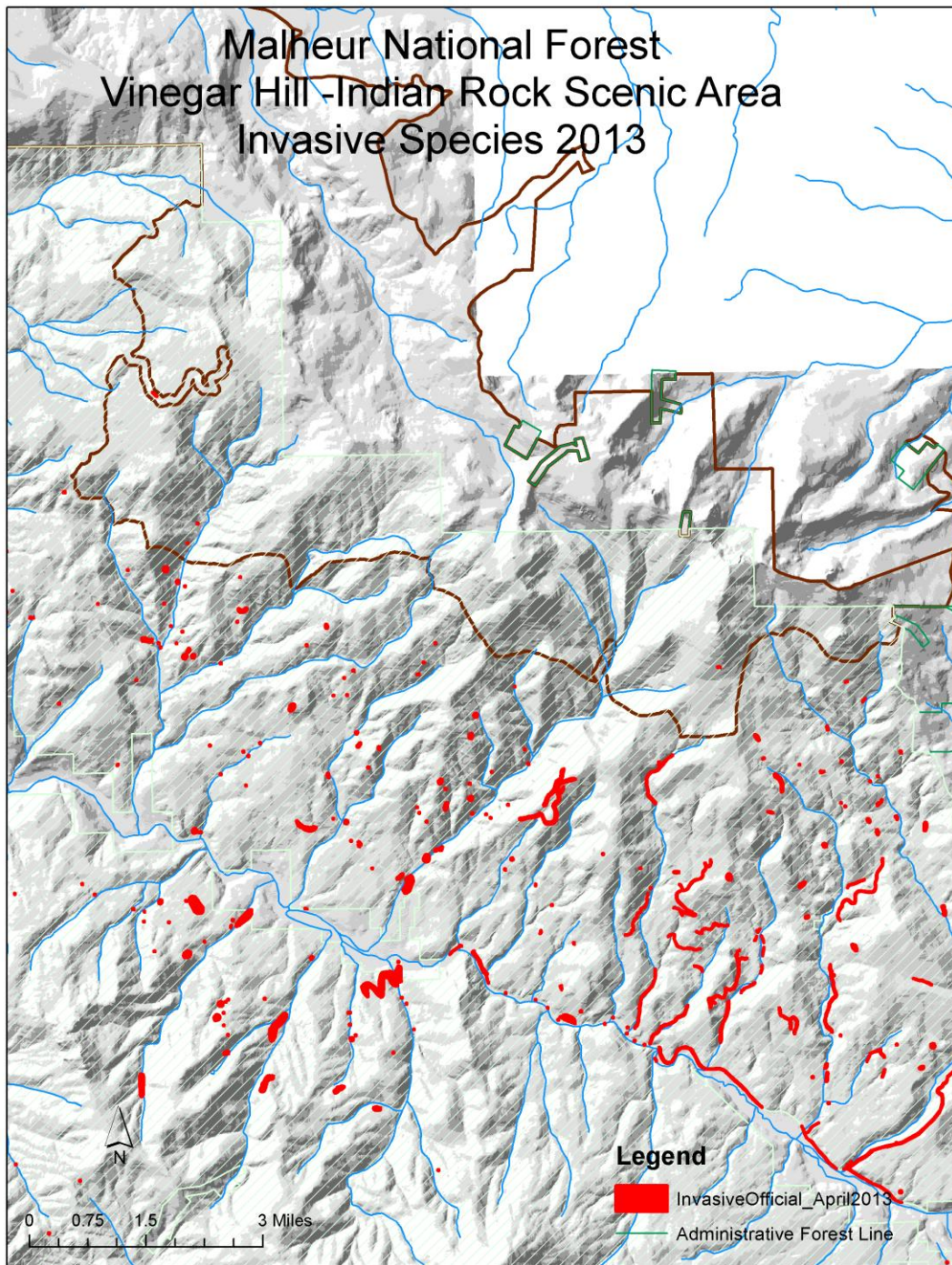


Figure 9. Malheur National Forest, Vinegar Hill - Indian Rock Scenic Area and currently mapped Invasive species 2013.

## *Desired Condition*

### **Regulatory Framework:**

**Wilderness Areas:** Wilderness Act of 1964 and Oregon Omnibus Wilderness Act of 1984

**Wild & Scenic Rivers:** Wild and Scenic Rivers Act of 1968 as amended in 1988.

**Inventoried Roadless Areas:** The 2001 Roadless Conservation Rule.

**The Malheur National Forest Land and Resource Management Plan (LRP, 1990):** The Forest Plan recognizes the importance of recreation by providing management direction for recreation. The desired ROS is the direction recreation management actions take toward achieving the desired recreation opportunity in a particular geographic area. In the LRP the Forest is divided into Management Areas (MA). Each MA is assigned a desired ROS. Moreover, the LRP prescribes Goals, Objectives, and Standards for the MNF recreation program as well as specific direction for each MA.

### **Malheur Recreation Important Management Areas:**

**MA 6A and 6B: Wilderness** – These management areas include the Strawberry Mountain and Monument Rock Wilderness. The overall goal in MA 6A and B is to manage in accordance with values specified in the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984. Preserve and protect the wilderness character of the resource.

**MA 7: Scenic Areas** - This management area includes the Vinegar Hill – Indian Rock Scenic Area. The goal is to manage this area to preserve and protect outstanding natural esthetics.

**MA 10: Semi-primitive Non-Motorized (SPNM) Recreation Areas** –The goal is to protect, enhance, and maintain the natural beauty and character of the undeveloped areas through effective visitor use and resource management. Manage to provide a wide range of semi-primitive non-motorized recreation opportunities while protecting existing environmental quality.

**MA 12: Developed Recreation Sites** – The goal is to manage for developed recreation opportunities, providing interpretation and enhancement of cultural and natural resources.

**MA 22: Wild and Scenic River** – The goal is to protect, enhance, and maintain the natural beauty, character, outstandingly remarkable values, and water quality. Preserve the free flowing condition of wild and scenic rivers and their corridors for the use and enjoyment of present and future generations.

**Roadless Areas (IRA)** – Although the Forest Plan doesn't designate separate IRA management areas it does mention management direction for Roadless Areas (the Forest Plan current was written in 1990 prior to the 2001 Roadless Area Conservation Rule). In the 1990 Forest Plan no new wilderness is recommended. The approximately 79,854 acres of suitable IRA acreage will be managed with no scheduled timber harvests and no additional roads (through semi-primitive motorized, non-motorized, and wild and scenic river allocations). These areas include Aldrich, Shakatable, McClellan Mountain, Bear Creek, Malheur River, Glacier Mountain, Myrtle-Silvies, and Green Horn Mountain.

**Malheur National Forest LRP Direction:***Forest Goals*

- 1) Provide a range of opportunities and settings which are consistent with public demand for a variety of activities, both motorized and non-motorized.
- 2) Provide for a distribution and variety of developed recreation facilities that are consistent with public demand for activities and experiences and are compatible with a forest environment.
- 3) Provide safe, well maintained developed facilities for the public's enjoyment.
- 4) Ensure high quality recreation experiences through facility location and design. Assure reasonably safe and accessible facilities to as many people as possible, including the handicapped.
- 5) Provide a diverse system of trails for the enjoyment of all users and to meet recreation users of the Forest.
- 6) Encourage public participation in the development of partnerships with recreation users of the Forest.
- 7) Provide interpretation, information, and education on ecological principles significant cultural resources to preserve their historical, cultural, archaeological, and/or architectural values.

*Wilderness*

- 1) Manage designated wilderness to preserve and protect their wilderness character in accordance with the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.

*Desired Future Condition – 1999**Recreation*

There would continue to be a variety of recreation settings in which activities and experiences can be enjoyed. Dispersed recreation opportunities would be emphasized on approximately 5% of the Forest outside the wilderness. Of this, 14,578 acres would be managed for semi-primitive motorized recreation opportunities and 62,392 acres would be managed with emphasis on semi-primitive non-motorized recreation opportunities.

Dispersed recreation opportunities will be emphasized on approximately 5% of the Forest outside the wilderness. Of this, 14,578 acres will be managed for semi-primitive motorized recreation opportunities and 62,392 acres will be managed with emphasis on semi-primitive non-motorized recreation opportunities.

*Trails- 1999*

The trail system will have increased by 465 miles to 1,115 miles....With 110 miles of snowmobile trails and as much as 94 miles of all terrain vehicle/off highway vehicle trails to be added to the system... There will also be approximately 118 miles of mountain bike and 79 miles of cross country ski trails developed over the decade.

*Wild and Scenic Rivers -1999*

The character of the wild and scenic river corridors will be maintained in a natural or near natural condition. By the end of the first decade, detail river management plans will have been completed and activities will be occurring as outlined.

### *Desired Future Condition – 2039*

#### *Recreation*

A variety of recreation opportunities would still exist on the Forest. Roadless recreation outside wilderness would still be available at the same level it was at the end of the first decade.

The existing developed recreation sites will still accommodate the anticipated demand during the majority of the summer and fall use seasons. Most of these sites will have been constructed to accommodate the increased use and some of the more used facilities will have been expanded to meet demand. No new campgrounds will have been constructed.

The Forest would continue to provide areas where semi-primitive recreation opportunities both motorized and non-motorized can be experienced. These areas would be sought after by recreationists in attempt to deviate from the swift pace of urban living.

#### *Trails – 2039*

The trail system will have increased to 1,155 miles. No additional miles of trail will have been added to the wilderness areas beyond the 10.5 miles completed in the first decade.

#### *Wild and Scenic Rivers – 2039*

The wild and scenic rivers on the Malheur will provide a river setting where future generations can still experience a feeling of being in an area unaffected by development activities. This will be an area where one can enjoy the scenic beauty of a river corridor.

#### *Forest Standards*

- 1) Recognize undeveloped campsites, hunter camps, or areas where concentrated recreation use occurs as being significant in providing dispersed recreation opportunities in a roaded setting. Manage these areas for partial retention, inventory, evaluate, and develop management objectives for these sites.
- 2) Construct, relocate, or protect designated system trails and facilities during management activities.

## Environmental Consequences

### *Methodology*

**Recreational Opportunity Spectrum:** The Forest Service uses a nationally recognized classification system called the Recreational Opportunity Spectrum (ROS) to describe different recreation settings, opportunities, and experiences that help guide recreation management decisions and activities on National Forest lands (USDA Forest Service 1986).

ArcGIS 9.3.1 geographic information system (GIS) was used to analyze the proposed activities in regards to recreation use and facilities, dispersed recreation sites, and the recreation opportunity spectrum (ROS) classes within the project area. The recreation analysis considered the area

within the project area, unless otherwise noted. The ROS classes found in the TMR project area includes:

**Semi-primitive Motorized (SPM)** – Area is predominately natural appearing, of moderate to large size, and user concentration is generally low. Evidence of other users and some on-site restrictions are present. Motorized use is permitted, usually is in the form of jeeps, all-terrain motorbikes, snowmobiles, and etc. Self-reliance, some solitude and closeness to nature generally prevail. One again, interpretation takes the form of self-discovery augmented by various publications. Social sharing of knowledge often goes beyond family and friends to include other users encountered in the area. Except in special situations, no agency provided contact, materials, or facilities are found in this class.

**Semi-primitive Non-motorized (SPNM)** – Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls, and restrictions may be present but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational experience opportunities.

**Roaded Natural (RN)** – Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

**Roaded Modified (RM)** – Area is characterized by a natural environment that has been substantially modified by development of structures and vegetative manipulation. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available (USDA Forest Service 1990).

**National Visitor Use Monitoring:** Estimates of recreation use are derived from the National Visitor Use Monitoring (NVUM) inventories done on the Malheur NF in 2003-04 and 2009-10. These inventories are conducted for all national forests on a 5 year cycle. These two NVUM surveys are the basis for estimating present recreation use and demand and for projecting the growth of recreation use on the Malheur NF.

The NVUM inventory process has limitations that should be understood. Visitor use is measured at specific predetermined recreation sites falling into high, medium, or low use categories. Small or little used sites are not included in the inventories. However, they may represent a significant contribution to a given recreation pursuit and not be adequately represented in the data. In addition, participation is voluntary and some visitors, or activities, may better lend themselves to interviewing. For example, a party pulling a pack string may be less inclined to participate because the disruption may provide opportunity for the string to get into trouble. Consequently, the data is collected from a segment that is willing or able to participate and extrapolated to represent visitor use as a whole.

**ArcGIS:** Maps and some data analysis were processed using ArcGis and the FS corporate GIS geodatabases and feature classes.

### Incomplete and Unavailable Information

Invasive species survey data for Wilderness Areas, Wild portions of the Wild and Scenic Rivers, and for the Scenic Area are limited. Invasive species surveys in these more remote areas with limited access makes surveying for invasive species a more time and funding intensive workload. Although limited additional invasive infestations are known to exist and additional surveying is planned for the near future, but it is not available in the GIS system in time for preparing this EIS.

### Spatial and Temporal Context for Effects Analysis

The spatial contexts for treatment areas that overlap the major categories for the recreation resource are shown in Table 3. Also included in the table is the number and acres of known infestations that are known and would be treated under the alternatives.

The effect on recreation and scenic resources resulting from implementation of the alternatives is described for the short-term and long-term (generally within the life of the project). It is assumed the effects described would be most prominent to the visiting public within the immediate area of recreation sites, administrative facilities, and travel corridors where invasive plant treatment activities are proposed. Invasive species sites that could affect Wilderness, Wild and Scenic River, Scenic Area, SPNM, and IRA values and infestation sites along major roads, and infestation sites within developed recreation areas would be considered high priority for treatment.

Table 3.10.2 shows the treatment areas overlapping the six major categories of recreation and scenic management, and the proposed acres of treatment of known sites that would occur under the three alternatives.

<b>Recreation Resource Areas</b>	<b>Number of known sites</b>	<b>Acres proposed for herbicide treatment – Alt. A</b>	<b>Acres proposed for herbicide treatment – Alt. B</b>	<b>Acres proposed for herbicide treatment – Alt. C</b>	<b>Acres proposed for herbicide treatment – Alt. D</b>
Wilderness	8	0	2.2	2.2	2.2
Wild and Scenic Rivers	15	0	0.9	0	0.9
Scenic Areas	4	0	2.4	2.4	2.4
Semi-Primitive ROS	15	0	4.2	4.2	4.2
IRAs	50	0	61.2	61.2	61.2
Recreation Sites (within 100 ft)	7	0	20	20	20

**Table 3. Malheur National Forest Recreation Resource Areas and Invasive species 2013.**

### Past, Present, and Foreseeable Activities Relevant to Cumulative Effects Analysis

A list of known ongoing and foreseeable projects planned for the Malheur National Forest is shown in Table 4. Projects and anticipated projects specifically centered on recreation resources include completing the Idlewild and Blue Mountain Summit SnoParks, annual hazard tree mitigation at campgrounds, annual trails clearing and maintenance, annual operation and maintenance of developed recreation sites, implementing the 2005 Travel Management Rule, and issuing additional recreation special use permits. Current foreseeable recreation budgets are such that additional recreation specific projects are not anticipated to occur in the foreseeable future.

Project name	Project Details	Potential Vector	Watershed(s)	Implementation Schedule
Bald Butte LO Decommission	Remove Lookout with explosives	Recreation Site management	Middle Silver Creek	2013
Bear Creek Riparian Juniper Thinning	Thin 47 acres of juniper	Vegetation Management	Upper South Fork John Day River	2014
Blue Mountain Snow Park	Clearing trees and leveling 7 acres and paving parking area; construction of warming hut, restrooms, and grooming shed; construction of pad for fuel tank	Recreation Site management	Summit Creek (170702030102)	2013
Buck and Rock Springs Campground Hazard Tree Removal Project	Remove hazard trees	Recreation Site management	Upper Silver Creek and Wolf Creek	2013
Camp Creek LWD	Felling and placing entire trees ranging from 4- 20 inches in diameter within the following streams and their associated Riparian Habitat Conservation Areas (RHCAs)	Stream Restoration	Upper Camp Creek (170702030205); Lick Creek (170702030205)	2013-14
Campground Hazard Tree Project	Remove hazard trees in D-Lake, Idlewild, Joaquin Miller, Yellowjacket, Emigrant Creek, Falls Camp	Vegetation Management	Upper Silver, Upper Silvies, North Basin, Emigrant Creek	2013
Dairy EA	Commercial harvest, road closures and decommissioning	Vegetation Management	Upper Silver Creek	2013-2014 road closures may go on for years
Damon	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Van Aspen-Silvies River (171200020105); Lower Scotty Creek (171200020104); Shirttail Creek (171200020301)	FY 11 to FY 13



Project name	Project Details	Potential Vector	Watershed(s)	Implementation Schedule
Dragon's Head Plantation PCT	thin plantations	Vegetation Management - Ground disturbance, open canopy	Wolf Creek and Upper Silvies River	2013 and beyond
Dragon's Hump Plantation PCT	PCT and treat slash on 5000 acres of plantations	Vegetation Management	Middle Silvies and Emigrant Creek	2013 and beyond
Egley Aspen Restoration Project	thin and remove conifers up to 20.9 inches in 20 acres of aspen	Vegetation Management	Emigrant Creek	2013
Egley/Pine Springs Overlook Interpretive Display Update and Toilet Replacement project	replace toilet	Recreation Site management	Middle Silver Creek	unknown, no funding, low priority
Elk 16	RX fire, commercial and non-commercial harvest, road closures and decommissioning, aspen restoration, aquatic restoration	Vegetation Management, Closing Roads, Restoring Roads and Landings, Stream Restoration	Elk Creek and Crane Creek Subwatershed	FY 2015
Galena Project	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Vinegar Creek-MFJDR (170702030201); Little Boulder Creek-MFJDR (170702030202)	FY 14 to FY 17
Green Ant Project (Formerly the Ant and Emigrant Projects)	Commercial harvest, road closures and decommissioning	Vegetation Management	Emigrant Creek	2013 and beyond
Idlewild Snowpark Relocation Project	Relocate snowpark	Recreation Site management	North Basin	2013
Jane Hazardous Fuel Reduction Project	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Wolf Creek	2013 and beyond
JB Spring Development and Trough	Develop spring, thin 5 acres of juniper	Livestock Grazing, Vegetation Management	Griffin Creek/Upper Malheur River	2013
Keeney Meadows Aspen	Non-commercial thinning and fencing 10 aspen stands	Vegetation Management	Bridge Creek (170702030105); Headwaters Long Creek (170702030401); East Fork Beech Creek (170702010802); Upper Camp Creek (170702030205); Headwaters Long Creek (170702030401);	July - Aug 2014
Logan Valley Grazing Authorization	Grazing authorization on the Summit Prairie, Logan Valley, McCoy Creek, and Lake Creek Grazing Allotment	Livestock Grazing	Lake Creek, Bosenberg Creek, Upper Big Creek, Summit Creek Subwatershed	FY 2014

Project name	Project Details	Potential Vector	Watershed(s)	Implementation Schedule
Malheur River Range Aquatics Projects	Extension of the Malheur River Drift Fence. Cross Springs water source reconstruction and extension to a second trough. Development of Dollar Basin Spring	Livestock Grazing	Lake Creek and Bosenberg Creek Subwatershed	FY 2013
Marshall/Devine Hazardous Fuel Reduction Project	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Upper Silvies River and North Basin	2013-2014 road closures may go on for years
Murderer's Creek Juniper Management Project	Cutting of juniper and mixed conifer, fuel treatment, aspen restoration, and watershed improvement activities.	Vegetation Management; Stream Restoration	Deardorff Creek (170702010502); Corner Creek-South Fork John Day River (170702010402); Lower Murderers Creek (170702010305); Lower Deer Creek (170702010206)	FY 2014
Plantation Maintenance Fox/Camp Creek	Non-commercial thinning of plantations	Vegetation Management	Dixie Meadows (170702010602); Bear Creek (17070201603); Grub Creek (170702010607); Upper Beech Creek (170702010801); East Fork Beech Creek (170702010802); Lower Beech Creek (170702010803); Birch Creek (170702010905); Dry Creek-John Day River (170702010906); Belshaw Creek (170702011003); Cummings Creek (170702011005); Wiley Creek (170702020902); McHaley Creek (170702020903); Lower Fox Creek (170702020904); Upper Cottonwood Creek (170702020905); Upper Camp Creek (170702030205); Lick Creek (170702030206); Lower Camp Creek (170702030207)	FY 13 to FY 23

Project name	Project Details	Potential Vector	Watershed(s)	Implementation Schedule
Plantation Maintenance Long Creek	Non-commercial thinning of plantations	Vegetation Management	Indian Creek-MFJDR (170702030303); Slide Creek (170702030304); Granite Creek-MFJDR (170702030305); Headwaters Long Creek (170702030401); Upper Long Creek (170702030402); Basin Creek (170702030404); Basin Creek (170702030406); Upper Deer Creek (170702021001); Upper Fox Creek (170702020901); McHaley Creek (170702020903)	FY 12 to FY 22
Sawtooth and Emigrant Creek Culvert Replacement	replace culverts	Stream restoration	Emigrant Creek	Sawtooth complete, Emigrant creek not, no funding, low priority
Sawtooth and Nicoll Checkdam Modification	modify existing structures	Stream restoration	Emigrant Creek and Upper Silver Creek	unknown, no funding, low priority
Schurtz Creek Story-Fry Riparian Restoration Project	Fence and thin conifers less than 21 inches	Vegetation Management	Wolf Creek	2013-2014
Season of Burn Research Project	Rx burn research units	Vegetation Management	Pine Creek and Upper Silvies River	2013 and beyond
SF John Day Culverts Replacements	Replace 3 culverts	Stream Restoration	Upper South Fork John Day River	2013 and beyond
Soda Bear	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Middle Bear Creek (171200020202); Lower Bear Creek (171200020204)	FY 13 to FY 15
South Fork John Day Riparian Juniper Thinning	thin 90 acres of juniper	Vegetation Management	Upper South Fork John Day River	unknown, no funding, low priority
Starr Aspen	Commercial and Non-commercial thinning, Rx fire, fencing, wood in streams, road closures	Vegetation Management, Closing Roads, Restoring Roads and Landings, Stream Restoration	Starr Creek-Silvies River (171200020102)	FY 15
Starr HFRA	RX fire, commercial and non-commercial harvest, road closures	Vegetation Management, Closing Roads, Restoring Roads and Landings	Starr Creek-Silvies River (171200020102)	FY 12 to FY 15

Project name	Project Details	Potential Vector	Watershed(s)	Implementation Schedule
Summit	RX fire, commercial and non-commercial harvest, road closures and decommissioning, aspen restoration, aquatic restoration	Vegetation Management, Closing Roads, Restoring Roads and Landings, Stream Restoration	Summit Creek and Tureman Creek Subwatersheds	FY 2016
Thompson Butte SUP Passive Reflector Removal	remove reflector	Recreation Site management	Pine Creek	2013
UMF Culvert Replacement	Replacement of 15 culverts located on twelve tributaries in two watersheds of the Middle Fork John Day River subbasin.	Stream Restoration	Summit Creek (170702030102); Bridge Creek (170702030105); Vinegar Creek-MFJDR (170702030205); Little Boulder Creek-MFJDR (170702030202); Granite Boulder-MFJDR (170702030203); Balance Creek (170702030208)	July - Aug 2014
Upper Pine Hazardous fuel Reduction Project	RX fire, commercial and non-commercial harvest, road closures and decommissioning	Vegetation Management, Closing Roads, Restoring Roads and Landings	Pine Creek	2014-2015 road closures may go on for years
Voigt Ditch Headgate Replacement	Replacing current head gate with a new one including a measuring device and extending pipe down existing easement.	Adjacent Agriculture	Mill Creek (170702030106)	July - Aug 2013
Whistle Prescribed Burn	Prescribed Burn 3450 acres	Ground disturbance, open canopy	Upper Silver Creek	unknown, low priority
Access and Travel Management	Designating roads available for use	Road Use	All	On Hold

**Table 4. Ongoing and foreseeable projects on the Malheur National Forest.**

There are some foreseeable projects in recreation special uses that most likely will have additional invasive species effects. In 2011 the Forest completed implementation of the 2007 revised Outfitter-Guide policy. It is likely the Malheur National Forest will issue a minor number of special use permits for providing recreation services on Forest lands. The public has expressed interest or obtained temporary special permits in the recent past in obtaining special use permits for such activities as back packing trips in the Wilderness areas, ice climbing, road biking tourism, mountain biking tours, hunting, and horse day rides. As with current recreational activities, these additional services have the potential to act as invasive species infestation vectors. Permittee education along with using appropriate terms and conditions clauses in Special Use Permits can aid in preventing invasive species infestations. For example, often a SUP will include terms and conditions prescribing appropriate treatment of invasive species if a particular area is a part of the special use permit, e.g. an outfitter-guide encampment.

It is also likely the Malheur National Forest will implement the 2005 Travel Management Rule in the foreseeable future. Two likely effects of addressing former Chief Bosworth's four threats including "unmanaged recreation" (<http://www.fs.fed.us/projects/four-threats/>) are an increased

use of OHVs on some Forest System roads and a dramatic reduction in cross country OHV use. It is likely any increased recreation use on roads will commensurately increase the likelihood of invasive species infestations. However, eliminating uncontrolled cross country travel is anticipated to significantly reduce the risk of invasive species infestations along closed roads and in the general forest area (GFA) no longer accessible to unmanaged OHV travel. Several avenues toward aiding in preventing the introduction of invasive species can be used. Signage and brochures at trail heads, campground kiosks, and district offices could aid in preventing new infestations and perhaps in private citizens reporting previously unknown invasive species infestations. Heightening public awareness of common ways invasive species are spread, e.g. mud on vehicles, RVs, and OHVs, can aid in preventing additional infestations.

## *Alternative A – No Action*

### Direct Effects and Indirect Effects

Under the no action alternative there would be no direct effects to the Malheur National Forest recreation resource areas of Wilderness, Wild and Scenic Rivers, Scenic Areas, Semi-Primitive Non-Motorized ROS areas, IRAs, and developed and dispersed recreation sites.

#### **Wilderness:**

The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling would not be effective in eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the Wilderness character and values would be negatively affected by expanding infestations.

#### **Wild and Scenic Rivers:**

The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling, mechanical, or cultural treatments would not be effective in eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the Wild and Scenic River Outstanding Remarkable Values (ORV) would be negatively affected by expanding infestations.

#### **Scenic Areas:**

The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling, mechanical, or cultural treatments would not be effective in eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the Scenic Area outstanding natural esthetics would be negatively affected by expanding invasive species infestations.

#### **ROS Semi-Primitive Non-Motorized (SPNM) and Inventoried Roadless IRAs:**

The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling, mechanical, or cultural treatments would not be effective in overall eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the SPM and IRA area's biological and botanical environments would be negatively affected by expanding infestations. Degradation of the biological and botanical environments would further degrade the natural beauty and character of the SPM and IRA areas.

**Recreation Sites:**

The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling, mechanical, or cultural treatments would not be effective in eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the scenic and natural appearing forest character of recreation sites would be impaired.

**Dispersed Recreation:**

Dispersed recreation occurs throughout the Malheur National Forest. Dispersed recreation includes a wide variety of activities including hunting, fishing driving for pleasure, firewood cutting, horse back packing and riding, road and mountain biking, camping, picnicking, wild plant collecting (mushrooms, camas, ferns, and etc.), and OHV riding. Dispersed recreation most likely will occur in all of the treatment areas to some extent. The current infestation would not be treated with herbicides under alternative A. EDRR would not be implemented under alternative A. Hand pulling, mechanical, or cultural treatments most likely would not be effective in eliminating or substantially reducing infestations. The current infestation would most likely continue to expand and new infestation sites would be expected to be established. Over time it would be expected that the scenic and natural appearing forest character of dispersed recreation sites would be impaired depending on the particular recreation activity and the nature of the invasive infestation.

**Cumulative Effects**

Under the no action alternative A it is anticipated invasive species infestation would continue to expand and pioneer additional sites. This expansion would result in negative effects on Wilderness character, Wild and Scenic River ORVs, Scenic Area outstanding natural esthetics, reduced biological and botanical environmental integrity or IRAs and SPM areas, and a reduction in the natural beauty of forest recreation sites.

**Summary of Effects**

Under the no action alternative A it is anticipated invasive species infestation would continue to expand and pioneer additional areas. This expansion would result in negative effects on Wilderness character, Wild and Scenic River ORVs, Scenic Area outstanding natural esthetics, reduced biological and botanical environmental integrity or IRAs and SPM areas, and a reduction in the natural beauty of forest recreation sites.

Concerns about exposure to herbicides would not be an issue under this alternative as herbicide treatment would not be used.

### *Alternatives B (Proposed Action); C, and D*

Alternative B, C, and D would all provide for herbicide application to invasive species infestations. These alternatives differ in that alternative C imposes strict limitations on herbicide application and alternative D, while similar to alternative B, would not provide for application of aminopyralid. Alternative C would eliminate broadcast spraying, eliminate picloram, prohibit herbicide application in Riparian Habitat Conservation Areas, i.e. including the Wild and Scenic River corridors, and establish herbicide free buffers of 100 feet from creeks, lakes, ponds, and wetlands. Herbicide application would be temporarily marked with use of blue dye to indicate what sites have been treated

In addition, alternatives B, C, and D provide for use of Early Detection Rapid Response (EDRR) approach toward addressing newly discovered invasive species infestations.

Where applicable, cultural, mechanical, and motorized (not in Wilderness or Wild designated Rivers) control methods would be used.

### **Design Features and Mitigation Measures**

Information specific to herbicide toxicology and Project Design Features (PDF) are located in chapter 2. Herbicide application is tailored to the specific invasive species, herbicide effectiveness, and environmental constraints through use of the PDFs and herbicide suitability.

### **Direct and Indirect Effects**

#### **Wilderness:**

Invasive species would continue to be pulled by hand or hand tools where practical. Cultural, mechanical and motorized control methods would not be utilized in Wilderness areas. Herbicide application would be used in accord with the PDF prescribed using non-motorized methods such as spot spraying with backpack or mule packed application equipment.

Infestations that would impact wilderness character and values would be evaluated for treatment and if suitable given a high priority for treatment. New sites would be evaluated for suitable treatment(s) using the EDRR process. In order to conduct treatments other than hand pulling a minimum decision analysis would be conducted and documented.

The use of herbicides in Wilderness Areas may reduce the wilderness experience for some users in the short term, but active treatment provides the best protection of wilderness character and values. The purpose and need for invasive plant treatment is not driven primarily by convenience or administrative cost. In addition Invasive plants have an adverse effect by disrupting natural processes. Invasive species may alter native plant communities and have indirect effects with

wildlife species that rely on the native plant communities. Invasive species may also alter fire regimes that may ultimately alter wilderness ecological processes.

By utilizing the appropriate PDF it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of wilderness character and values. It is likely that most sites discovered in wilderness in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in visual impacts to the recreation experience of some visitors. However, these effects would be short term and limited to the vicinity of the treated site. Compared with implementing alternative B, alternative D is estimated to decrease cost effectiveness; and alternate C is estimated to be provide less effective and be less cost effective.

### **Wild and Scenic River:**

Infestation sites in the Wild and Scenic River corridors would be treated. Depending on the chosen alternative the treatment method would vary among alternative by the method and herbicide used. Compared with implementing alternative B, alternative D is estimated to decrease cost effectiveness. Under alternative C no herbicide would be used in the WSR corridor and treatment would consist of hand pulling, cultural, and mechanical methods. It is estimated using alternative C would be less effective overall in treating infestations.

The use of herbicides in Wild and Scenic Rivers may reduce the 'wild' experience for some users in the short term especially in the Wild designated corridor, but active treatment provides the best protection of the outstanding and remarkable values. Treating Wild and Scenic River infestations would have short term adverse effects by introducing human manipulation, but would result in long term beneficial effects to wilderness character and values by restoring natural conditions.

By utilizing the appropriate PDF treatment methods it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of Wild and Scenic ORVs. It is likely that most sites discovered within the Wild and Scenic River corridors in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in visual impacts to the recreation experience of some visitors. However these effects would be short term and limited to the vicinity of the treated site.

### **Scenic Areas:**

Infestation sites in the Scenic Area would be treated by hand pulling, mechanical, motorized (where accessible), cultural, and herbicide application. Depending on the chosen alternative the treatment method would vary among alternative by the method and herbicide used. Under alternative C no herbicide would be used in RHCAs and treatment would consist of hand pulling, cultural, and mechanical methods. It is estimated using alternatives C and D would be less effective overall in treating infestations due to the limitations on herbicide type and allowed use.

By utilizing the appropriate PDF treatment methods it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of the outstanding natural esthetics of the Scenic Area. It is likely that most sites discovered within the Scenic Area in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in



visual impacts to the recreation experience of some visitors. However these effects would be short term and limited to the vicinity of the treated site.

### **ROS Semi-Primitive Non-Motorized (SPMN) and Inventoried Roadless IRAs**

Infestation sites in the SPMN and IRA areas would be treated by hand pulling, mechanical, motorized (where accessible), cultural, and herbicide application. Depending on the chosen alternative the treatment method would vary among alternative by the method and herbicide used. Under alternative C no herbicide would be used in RHCAs and treatment would consist of hand pulling, cultural, and mechanical methods. It is estimated using alternative C and D would be less effective overall in treating infestations due to the limitations on herbicide type and allowed use.

By utilizing the appropriate PDF treatment methods it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of the native biological and botanical environments. It is likely that most sites discovered within the SPMN and IRA areas in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in visual impacts to the recreation experience of some visitors. However these effects would be short term and limited to the vicinity of the treated site.

### **Recreation Sites:**

Infestation sites in and near recreation sites would be treated by hand pulling, mechanical, motorized (where accessible), cultural, and herbicide application. Depending on the chosen alternative the treatment method would vary among alternative by the method and herbicide used. Under alternative C no herbicide would be used in RHCAs and treatment would consist of hand pulling, cultural, and mechanical methods. It is estimated using alternative C and D would be less effective overall in treating infestations due to the limitations on herbicide type and allowed use.

By utilizing the appropriate PDF treatment methods it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of the scenic and natural appearing forest character. It is likely that most sites discovered within and near the recreation sites in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in visual impacts to the recreation experience of some visitors. However these effects would be short term and limited to the vicinity of the treated site. Recreation sites under going treatment would be marked and forest visitors would be discouraged from recreating in the vicinity of sites recently treated and may chose to relocate to alternative recreation sites. However this effect would be of short duration.

### **Dispersed Recreation:**

Infestation sites in and near dispersed recreation sites would be treated by hand pulling, mechanical, motorized (where accessible), cultural, and herbicide application. Depending on the chosen alternative the treatment method would vary among alternative by the method and herbicide used. Under alternative C no herbicide would be used in RHCAs and treatment would consist of hand pulling, cultural, and mechanical methods. It is estimated using alternative C and D would be less effective overall in treating infestations due to the limitations on herbicide type and allowed use.

Dispersed recreation occurs throughout the Malheur National Forest. Dispersed recreation includes a wide variety of activities including hunting, fishing driving for pleasure, firewood cutting, horse back packing and riding, road and mountain biking, camping, picnicking, wild plant collecting (mushrooms, camas, ferns, and etc.), and OHV riding. Dispersed recreation most likely will occur in all of the treatment areas to some extent. By utilizing the appropriate PDF treatment methods it is anticipated invasive species infestations would be eliminated, reduced, and the rate of spread retarded. This would result in recovery or protection of the scenic and natural appearing forest character. It is likely that most sites discovered within and near dispersed recreation sites in the future would be relatively small infestations and the effects of treatment would be minor. The visual impact of the short lived blue dye may result in visual impacts to the recreation experience of some visitors. However these effects would be short tem and limited to the vicinity of the treated site. Dispersed recreation sites under going treatment would be temporarily marked and forest visitors would be discouraged from recreating in the vicinity of sites recently treated and consequently may chose to relocate to alternative recreation sites. However this effect would be of short duration.

### **Human Health:**

Human health is covered in Chapter 3 where the potential for herbicides treatments are valuated as to their affects on the health and safety of the recreating public. Utilizing the in PDFs in Chapter 2 are intended to ensure no harmful exposures would occur.

### **Forest Plan Amendments:**

Proposed forest Plan amendments, e.g. the ability to use aminopyralid under alternative D, would have no effect on recreation and scenic resources.

### **Cumulative Effects**

Because the effects of invasive plant treatments on recreation and scenic resources are minimal, limited, localized, and short-term, there is very little chance the effects would accumulate with effects brought on by past, present or future management activities.

The following lists ongoing and foreseeable projects types on the Forest, and the potential overlap of impacts of invasive plant treatments on recreation and scenic resources.

<b>Project Category</b>	<b>Implementation dates</b>
Fuels Reduction and Vegetation Management	<p>I Invasive plant treatments on the Forest may overlap in time and space with vegetation management projects. Vegetation management plans include measures to protect recreation and scenic resources, where applicable.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would exceed thresholds of concern.</p> <p>The impacts of invasive plant treatment are not likely to add to vegetation management impacts on recreation and scenic resources in any discernible way.</p>

Allotment Management Plans and Grazing	<p>Invasive plant treatments on the Forest overlap in time and space with livestock grazing.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would exceed thresholds of concern.</p> <p>Less than 1% of the acres in active allotments would be treated in a given year. The impacts of invasive plant treatment are not likely to add to grazing impacts on recreation and scenic resources in any discernible way.</p>
Recreation Projects	<p>Invasive plant treatments on the Forest may overlap in time and space with recreation projects.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would exceed thresholds of concern.</p> <p>Invasive plant treatment may improve the condition of recreation sites over the long term, contributing to the benefit of recreation projects.</p>
Special Uses	<p>Invasive plant treatments on the Forest may overlap in time and space with special use projects. Special use permits include measures to prevent the spread of invasive plants and protect recreation and scenic resources, where applicable. Major projects like pipelines and road realignments include restoration plans.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short-term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would exceed thresholds of concern.</p> <p>The impacts of invasive plant treatment are not likely to add to the impacts of special use projects on recreation and scenic resources in any discernible way.</p>
Aquatic and Riparian Habitat Restoration	<p>Invasive plant treatments on the Forest may overlap in time and space with aquatic and riparian habitat restoration. Restoration projects are often designed to promote native riparian vegetation, which may improve recreation and scenic values.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would exceed thresholds of concern.</p> <p>Invasive plant treatments will aid in restoration of riparian areas, and are not likely to add to the impacts of restoration projects on recreation and scenic resources in any discernible way.</p>
Travel Management Rule Implementation	<p>Invasive plant treatments on the Forest will overlap in time and space with the Travel Management project.</p> <p>Impacts from invasive plant treatments to recreation and scenic resources are limited to minor, short term visual effects and temporary closing of recreation sites. Measures protect the public from herbicide exposures that would</p>

	<p>exceed thresholds of concern.</p> <p>Invasive plant treatments are not likely to add to the impacts of Travel Management on recreation and scenic resources in any discernible way.</p>
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**Table 6 . Malheur National Forest ongoing and foreseeable projects by resource areas and their potential impacts to the recreation resource.**

## Compliance with Forest Plan and Other Relevant Laws, Regulations, Policies and Plans

Invasive species treatment would be in compliance with all applicable laws and regulations as pertaining to recreation resources. Numerous Federal laws require all Federal land management agencies including the Forest Service to consider recreation resources in land management planning, resource planning, and project design implementation and monitoring. These Federal laws include the following:

- Wilderness Act of 1964
- Wild and Scenic Rivers Act of 1968
- National Trails System Act of 1968
- Forest and Rangeland Renewable Resources Planning Act of 1974
- National Forest Management Act of 1976
- US P.L. 90-542, 1968. Wild and Scenic Rivers Act.
- US P.L. 100-577. Omnibus Oregon Wild and Scenic Rivers Act of 1988.

Forest Service policies to manage, protect, and improve recreation resources of National Forests were established in Forest Service objectives and policies outlined in Forest Service Manual (FSM) 2300, the Forest Plan, and the following USDA and USFS Handbooks:

- 1986 ROS Book (unnumbered)
- ROS Primer and Field Guide (R6-REC-021-90)
- ROS Users Guide 1982 (unnumbered)
- USDA FS 1990. Malheur National Forest Land and Resource Management Plan.
- USDA FS 1993a. Malheur Wild and Scenic River Management Plan.
- USDA FS 1993b. North Fork of the Malheur Scenic River Management Plan.
- USDA PNW 2012, Aquatic Restoration Site Visit, Malheur National Forest Service, Prairie City Ranger District. pg. 12

## Summary of Effects

Implementing alternatives B, C, or D is expected to assist in eliminating, controlling, and reducing the rate of invasive species spread. Alternative B is considered to be the most effective and most cost effective treatment alternative compared to A, C, or D. Implementing an effective invasive species program will help ameliorate negative effects on Wilderness character, Wild and Scenic River ORVs, Scenic Area outstanding natural esthetics, reduced biological and botanical environmental integrity or IRAs and SPNM areas, and a reduction in the natural beauty of forest recreation and dispersed recreation sites.

Implementing an effective invasive species program using the appropriate PDF for the treatment location, timing, and specie of concern is anticipated not to cause adverse human health effects.

## Monitoring Recommendations

Under all alternatives, including No Action, invasive plant treatments are monitored according to Forest Service and regional policy. All invasive plant treatments are monitored for treatment effectiveness under FACTS reporting system. In addition, invasive plant treatments may be monitored for project design feature effectiveness under the R6 2005 ROD monitoring framework. See R6 2005 ROD Appendix 2 for details.

## References

US P.L. 90-542, 1968. Wild and Scenic Rivers Act.

US P.L. 100-577. Omnibus Oregon Wild and Scenic Rivers Act of 1988.

USFS. 1990. Malheur National Forest Land and Resource Management Plan. U.S. Forest Service, Malheur National Forest, John Day OR.

USDA. 1990. ROS Primer and Field Guide.

USDA FS 1993a. Malheur Wild and Scenic River Management Plan.

USDA FS 1993b. North Fork of the Malheur Scenic River Management Plan.

USDA 2001. Special Areas; Roadless Area Conservation Rule 36 CFR Part 294.

USDA. 2003 Malheur National Forest National Visitor Use Monitoring Report. U.S. Forest Service, Malheur National Forest, John Day, OR.

USDA. 2005. Pacific Northwest Region Invasive Plant Program: Preventing and Managing Invasive Plants Final Environmental Impact Statement. U.S. Forest Service R6 Regional Office, Portland, OR.

USDA 2009 Malheur National Forest National Visitor Use Monitoring Report. U.S. Forest Service, Malheur National Forest, John Day, OR.